Notice of Allowability	Application No.	Applicant(s)	
	10/083,075	DETTINGER ET AL.	
	Examiner	Art Unit	
	GWEN LIANG	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the applicant's communications, filed on 07/05/2005 and 07/29/2005*.

2. ☒ The allowed claim(s) is/are *27-52*.

3. ☒ The drawings filed on *26 February 2002* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *08082005* .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

1. This action is responsive to communications regarding the applicant's communications, filed on 07/05/2005 and 07/29/2005.

Response to Arguments

2. Applicant's arguments filed on 7/5/2005 with respect to the Office action mailed on May 5/5/2005 have been fully considered and are persuasive in view of the applicant's amendment filed on 7/5/2005. Therefore, the objections and rejections under 35 USC 103 have been withdrawn.

Furthermore Applicant's Terminal Disclaimer filed on 08/04/2005 has been acknowledged and approved. Therefore the Double Patenting rejections have been withdrawn.

EXAMINER'S AMENDMENT

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Gero McClellan on August 6 2005.

In the specification, page 24, Abstract:

Remove the title "IMPROVED APPLICATION PORTABILITY AND EXTENSIBILITY THROUGH DATABASE SCHEMA AND QUERY ABSTRACTION".

In the claims:

Replace claim 27 with the following text.

27. A computer-implemented method of providing access to data having a particular physical data representation, comprising:

providing a plurality of logical field definitions, each of the definitions comprising a logical field name, at least one location attribute identifying a location of physical data corresponding to the logical field name, and a reference to an access method selected from at least two different access method types; wherein each of the different access method types defines a different manner of exposing the physical data corresponding to the logical field name of the respective logical field definition: and

providing, for a requesting entity, a query specification defining an interface to the plurality of logical field definitions thereby allowing abstract queries to be composed on the basis of the plurality of logical field definitions.

Replace claim 29 with the following text.

29. The method of claim 27, wherein the access method types comprise a filtered access method defining a filter applied to physical data located at a location identified by a respective location attribute of a respective logical field definition, wherein

the filter removes selected data from the physical data so that only a subset of the physical data is exposed by the respective logical field definition referencing the filtered access method.

Replace claim 30 with the following text.

30. The method of claim 27, wherein the access method types comprise a composed access method defining an expression applied to physical data located at a location Identified by a respective location attribute of a respective logical field definition, wherein application of the expression produces values different from the physical data to which the expression is applied.

Replace claim 32 with the following text.

32. The method of claim 27, wherein the abstract query

comprises:

at least one selection criterion specifying at least one condition defined on the basis of the one or more of the plurality of logical field definitions; and

a result specification specifying one or more of the plurality of logical field definitions to be returned as results for each of the abstract queries.

Replace claim 33 with the following text.

33. A computer-implemented method of accessing physical data having a particular physical data representation, comprising:

issuing an abstract query by a requesting entity according to a query specification of the requesting entity; wherein the query specification defines an

interface to a data abstraction model defining a plurality of logical field definitions mapping logical fields to the physical data and wherein the abstract query is composed on the basis of the plurality of logical field definitions; and

transforming the abstract query into a query consistent with the particular physical data representation according to the data abstraction model depending on which of the plurality of logical fields definitions are referenced by the abstract query, wherein each of the logical field definitions comprises a logical field name, at least one location attribute identifying a location of physical data corresponding to the logical field name, and a reference to an access method selected from at least two different access method types; wherein each of the different access method types defines a different manner of exposing the physical data corresponding to the logical field name of the respective logical field definition.

Replace claim 35 with the following text.

35. The method of claim 33, wherein the access method types comprise a filtered access method defining a filter applied to physical data located at a location identified by a respective location attribute of a respective logical field definition, wherein the filter removes selected data from the physical data so that only a subset of the physical data is exposed by the respective logical field definition referencing the filtered access method.

Replace claim 36 with the following text.

36. The method of claim 33, wherein the access method types comprise a composed access method defining an expression applied to physical data located at a location identified by a respective location attribute of a respective logical field definition, wherein application of the expression produces values different from the physical data to which the expression is applied.

Replace claim 38 with the following text.

38. A computer-readable medium containing a program which, when executed by a processor, performs an operation of providing access to data having a particular physical data representation, the program comprising:

a data abstraction model comprising a plurality of logical field definitions each mapping to different elements of the data, wherein each of the logical field definitions comprises a logical field name, at least one location attribute identifying a location of physical data corresponding to the logical field name, and a reference to an access method selected from at least two different access method types, and wherein each of the different access method types defines a different manner of exposing the physical data corresponding to the logical field name of the respective logical field definition, wherein the data abstraction model is configured to be referenced by a requesting entity to compose abstract queries on the basis of the plurality of logical field definitions.

Replace claim 40 with the following text.

40. The computer-readable medium of claim 38, wherein the access method types comprise a filtered access method defining a filter applied to physical data located

at a location identified by a respective location attribute of a respective logical field definition, wherein the fitter removes selected data from the physical data so that only a subset of the physical data is exposed by the respective logical field definition referencing the filtered access method.

Replace claim 41 with the following text.

41. The computer-readable medium of claim 38, wherein the access method types comprise a composed access method defining an expression applied to physical data located at a location identified by a respective location attribute of a respective logical field definition, wherein application of the expression produces values different from the physical data to which the expression is applied.

Replace claim 44 with the following text.

44. A computer-readable medium containing a program which, when executed by a processor, performs an operation of accessing data having a particular physical data representation, the operation comprising:

receiving an abstract query by a requesting entity according to a query specification of the requesting entity; wherein the query specification defines an interface to a data abstraction model defining a plurality of logical field definitions mapping logical fields to the physical data and wherein the abstract query Is composed on the basis of the plurality of logical field definitions; and

transforming the abstract query into a query consistent with the particular physical data representation according to the data abstraction model depending on

which of the plurality of logical fields definitions are referenced by the abstract query, wherein each of tits logical field definitions comprises a logical field name, at least one location attribute identifying a location of physical data corresponding to the logical field name, and a reference to an access method selected from at least two different access method types; wherein each of the different access method types defines a different manner of exposing the physical data corresponding to the logical field name of the respective logical field definition.

Replace claim 46 with the following text.

46. The computer-readable medium of claim 44, wherein the access method types comprise a filtered access method defining a filter applied to physical data located at a location identified by a respective location attribute of a respective logical field definition, wherein the filter removes selected data from the physical data so that only a subset of the physical data is exposed by the respective logical field definition referencing the filtered access method.

Replace claim 47 with the following text.

47. The computer-readable medium of claim 44, wherein the access method types comprise a composed access method defining an expression applied to physical data located at a location identified by a respective location attribute of a respective logical field definition, wherein application of the expression produces values different from the physical data to which the expression is applied.

Replace claim 49 with the following text.

49. A computer, comprising:

a memory containing at least:

(i) a data abstraction model which maps logical fields to physical data organized according to a particular data representation, the data abstraction model comprising a plurality of logical field definitions each mapping to different elements of the data; wherein each of the logical field definitions comprises a logical field name, at least one location attribute identifying a location of physical data corresponding to the logical field name, and a reference to an access method selected from at least two different access method types; and wherein each of the different access method types defines a different manner of exposing the physical data corresponding to the logical field name of the respective logical field definition; wherein the data abstraction model is configured to be referenced by a requesting entity to compose abstract queries on the basis of the plurality of logical field definitions; and

(ii) a runtime component configured to transform an abstract query, received from the requesting entity, into a query consistent with the particular physical data representation and according to the data abstraction model depending on which of the plurality of logical fields definitions are referenced by the abstract query; and

a processor adapted to execute contents of the memory.

Replace claim 51 with the following text.

51. The computer of claim 49, wherein the access method types comprise a filtered access method defining a filter applied to physical data located at a location identified by a respective location attribute of a respective logical field definition, wherein the filter removes selected data from the physical data so that only a subset of the physical data is exposed by the respective logical field definition referencing the filtered access method.

Replace claim 52 with the following text.

52. The computer of claim 49, wherein the access method types comprise a composed access method defining an expression applied to physical data located at a location identified by a respective location attribute of a respective logical field definition, wherein application of the expression produces values different from the physical data to which the expression is applied.

Allowable Subject Matter

4. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

5. Claims 27-52 are allowable in light of the applicant's amendment and in light of the prior art made of record.

The following is an examiner's statement of reasons for allowance:

In independent claim 27, the limitation of "providing a plurality of logical field definitions, each of the definitions comprising ...a reference to an access method

selected from at least two different access method types; wherein each of the different access method types defines a different manner of exposing the physical data corresponding to the logical field name of the respective logical field definition", taken with the other limitations of the claim, were not disclosed by, would not have been obvious over, nor otherwise fairly disclosed by the prior art of record.

Independent claims 33, 38, 44, and 49 are allowed on grounds corresponding to the reasons included in those given above for claim 27.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GWEN LIANG whose telephone number is 571-272-4038. The examiner can normally be reached on 12:00 P.M. - 8:30 P.M. Monday and Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN BREENE can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

8 August 2005
G.L.

Primary Examiner
Art Unit 2167